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REMARKS

This response is intended as a full and complete response to the final Office Action mailed on July 13, 2005. In the Action, the Examiner notes that claims 32-44 are pending and rejected. In this response, the claims continue unamended.

In view of the following discussion, Applicants submit that none of the claims now pending in the application are obvious under the provisions of 35 U.S.C. §103. Thus, Applicants believe that all these claims are now in allowable form.

It is to be understood that Applicants do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the prior art of record to the pending claims by filing the instant responsive amendment.

REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a)

Claims 32-34, 36-41 and 43-44

The Examiner has rejected claims 32-34, 36-41 and 43-44 under 35 U.S.C. §103(a) as being unpatentable over Adams (US 6,044,396, hereinafter "Adams") in view of Voois (US 6,404,776, hereinafter "Voois") Applicants respectfully traverse the rejection.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (C.C.P.A. 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F2d. 1382, 1385, 165 USPQ 494 496 (C.C.P.A. 1970), M.P.E.P. 2143.03. Moreover, the mere fact that a prior art structure could be modified to produce the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992); *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the

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claimed invention, <u>considered as a whole</u>, would have been obvious. <u>Jones v. Hardy,</u> 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, <u>Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.,</u> 230 USPQ 416, 420 (Fed. Cir. 1986) (emphasis added). Moreover, the invention <u>as a whole</u> is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added).

Adams and Voois alone or in combination fail to teach or suggest Applicants' invention <u>as a whole</u>.

Applicants' independent claims 32 and 40 recite, respectively:

> 32. "In an information distribution system comprising server equipment for providing both content and non-content data to subscriber equipment, said server equipment comprising:
> a multiplex switch for multiplexing a plurality of formatted content streams from server modules to produce an output stream that is adapted for transport via a communication channel, wherein said multiplexing of said formatted content streams is statistically performed; wherein said multiplex switch is further for formatting non-content data and for selectively multiplexing formatted non-content data into said output stream, and wherein <u>said multiplexing of formatted non-content data is on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams.</u>" (Emphasis added)

> 40. "A method of providing content and non-content data to subscriber comprising the steps of:
> statistically multiplexing a plurality of formatted content streams to produce an output stream that is adapted for transport via a communication channel;
> formatting non-content data to fit the output stream;
> <u>predicting bandwidth availability based on the statistical multiplexing of the formatted content streams;</u> and
> <u>selectively multiplexing formatted non-content data into said output stream on a bandwidth availability basis.</u>" (Emphasis added).

The present invention discloses that the switching module 234 may be able to predict future bandwidth availability and, therefore, give priority to IP packets over video and audio MPEG packets. The switch may preferentially multiplex the non-content data comprising control information such that system elements requiring that control information may be rapidly communicated with. Additionally, the switch 230 may

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preferentially multiplex the non-content control data over either the video and/or audio data provided by the server modules or the non-content non-control data. (See Specification: page 13, lines 8-21.) Specifically, the future bandwidth is predicted based on the multiplexing of the formatted content packets. The prediction allows the formatted non-content data to be multiplexed into the output stream as desired. As stated in the claims, "predicting bandwidth availability based on the statistical multiplexing of the formatted content streams; and selectively multiplexing formatted non-content data into said output stream on a bandwidth availability basis."

Adams does not disclose predicting bandwidth availability and selectively multiplex based on that predicted availability. Adams discloses transmitting video data in a continuous fashion, and when there is no more video data to transmit, the application data will be transmitted. Moreover, a selector 404 that continuously reads from the application buffer 402 until data is detected in one or more of the video buffers 400. At that time, the selector 404 will read from the video buffers 400 in a round-robin fashion. (See Column 5, lines 1-8).

A significant difference between Adams and the pending claims is that the pending claims recite that the formatted non-content data is multiplexed when the output stream is predicted to allow that type of data base on the formatted content stream. Thus, "wherein said multiplexing of formatted non-content data is on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams" is not taught, suggested or disclosed by Adams. Therefore, the present invention is completely different from Adams since Applicants' invention multiplexes based on predicted output stream bandwidth, while Adams does not teach or suggest that any prediction of output stream bandwidth is performed. Nowhere in Adams is there any teaching or suggestion of the feature "wherein said multiplexing of formatted non-content data is on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams."

Voois fails to bridge the substantial gap between Adams and Applicants' invention. Voois does not suggest, teach or disclose "multiplexing of formatted non-content data is on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams." Voois discloses that different types of

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data can be formatted and multiplexed through a common communications channel (See Voois, Column 4, lines 50-54). Voois also discloses that the multiplexer indicated the amount of unused space in the buffer to a predictive filter. If the bandwidth is not optimal or the channel is unable to transmit all the data at the desired rate, the predictive filter will inform the video codec and it will transmit the video at a slower rate thereby reducing the amount of error in the transmission channel (See Voois, Col 11, lines 44-59). However, Voois does not suggest or teach multiplexing of formatted non-content data on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams. More specifically, Voois tries to improve the transmission by predicting bandwidth and reducing the transmission rate of the content data if the available bandwidth is small. Voois does not predict future bandwidth in order to multiplex formatted non-content data into formatted content streams. Thus, Voois does not suggest or teach multiplexing of formatted non-content data on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams.

The limitation "wherein said multiplexing of formatted non-content data is on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams" is not taught, suggested or disclosed in Adams and Voois as a whole. As such, Applicants submit that independent claims 32 and 40 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Furthermore, claims 33-34, 36-39, 41, and 43-44 respectively depend from independent claims 32 and 40 and recite additional limitations thereof. As such, and at least for the same reasons as discussed above, Applicants submit that these dependent claims are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, Applicants respectfully request that the Examiner's rejections be withdrawn.

Claims 35 and 42

The Examiner has rejected claims 35 and 42 under 35 U.S.C. §103(a) as being unpatentable over Adams in view of Voois as applied to claims 33 and 40 above, and

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further in view of Krause et al. (US 5,877,812, hereinafter "Krause"). Applicants respectfully traverse the rejection.

Claims 35 and 42 are dependent, directly or indirectly, respectively, upon independent claims 32 and 40 and recite additional limitations thereof. For at least the reasons discussed above with respect to independent claims 32 and 40, Adams and Voois alone or in combination fail to teach or suggest Applicants' invention as a whole.

Furthermore, Krause fails to bridge the substantial gap between Adams and Voois and Applicants' invention. Krause does not suggest, teach or disclose "multiplexing of formatted non-content data is on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams." Krause discloses a way to encode, format and distribute compressed video programs. Krause is concerned with reducing the size of data rate fluctuations that occur in forming a multiplex of a set of program streams. Krause makes no mention or the desirability of formatting non-content data and transmitting that data based on the multiplexed formatted content streams. Thus, Adams, Voois and Krause, singly or in combination, fail to suggest, teach or disclose "multiplexing of formatted non-content data is on a bandwidth availability basis that is predicted based on said multiplexing of said formatted content streams." To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Therefore, the 35 U.S.C. §103 should be withdrawn.

As such, Applicants submit that independent claims 32 and 40 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Furthermore, claims 35 and 42 depend, directly or indirectly, respectively from independent claims 32 and 40 and recite additional limitations thereof. As such, and at least for the same reasons as discussed above, Applicants submit that these dependent claims are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, Applicants respectfully request that the Examiner's rejections be withdrawn.

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THE SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

CONCLUSION

Thus, Applicants submit that all the claims presently in the application are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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